SECTION 11191 - CHEMICAL PUMPS, METAL BODY

City of San Diego, CWP Guidelines

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NTS: This pump is a constant speed pump normally used as a transfer pump in chemical feed systems.

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PART 1 - GENERAL

1.1 WORK OF THIS SECTION

A. The WORK of this Section includes metal body chemical pumps with horizontal electric motors, and all appurtenances.

1.2 RELATED SECTIONS

A. The WORK of the following Sections applies to the WORK of this Section. Other Sections of the Specifications, not referenced below, shall also apply to the extent required for proper performance of this WORK.

1. Section 11175 Pumps, General

PART 2 - PRODUCTS

2.1 PUMP NAME: [ ] (P-[ ] through P-[ ])

A. **General:** Metal body chemical pumps shall be suitable in all parts and materials for the type of chemical involved and they shall conform to the following requirements:

1.	Number of pumps	- [	]
2.	Location	- [	]
3.	Service	- [	]
4.	Operation (hours per day)	- [	]

B. **Operating Conditions:**

1.	Capacity (gpm)	- [	]
2.	NPSH available at suction (ft)	- [	]
3.	Pump head (TDH-ft) (in feet of W.C., adjusted for sp. grav. of chemical)	- [	]
4.	Total discharge head (ft)	- [	]

5.	Liquid to be pumped	-	[ ]
6.	Specific gravity of liquid	-	[ ]
7.	Liquid temperature (degrees F)	-	[ ]
8.	Liquid viscosity (centistokes)	-	[ ]
9.	pH of liquid	-	[ ]
10.	Min pump efficiency (percent)	-	[ ]
11.	Max pump speed (rpm)	-	[ ]
12.	Min motor size (hp)	-	[ ]
13.	Max motor speed (rpm)	-	[ ]

C. **Pump Dimensions:**

1.	Min impeller diameter (in)	-	[ ]
2.	Min size suction flange (in)	-	[ ]
3.	Min size discharge flange (in)	-	[ ]
4.	Flange rating (psi)	-	[ ]

2.2 PUMP REQUIREMENTS

A. **Construction:** Construction of metal body chemical pumps shall conform to the following requirements:

1.	Casing	-	Cast iron or ductile iron with Teflon or rubber lining
2.	Impeller	-	Cast iron, ductile iron, or steel, with teflon or rubber lining
3.	Bearing housing	-	Cast iron or ductile iron with oil reservoir
4.	Bearings	-	Single and double rows of radial and thrust bearings, with [50,000] [100,000] hours L-10 life
5.	Shaft	-	Stainless steel with Teflon or stainless sleeve
6.	Seal	-	Mechanical seal with stainless steel parts, carbon ring, ceramic seat and viton packing, or equivalent
7.	Coupling	-	Flexible coupling with guard

8. Pump base - Cast iron or fabricated steel base with drain

B. **Drive:** Unless otherwise indicated, the chemical metal body pumps shall have direct drives with horizontal, heavy-duty, TEFC electric motor, suitable for [480-volt, 3-phase, 60-Hz] ac power supply, in accordance with Section 16040.

2.3 SPARE PARTS

A. The following spare parts shall be provided for each pump:

1. 3 sets of all gaskets and O-rings
2. 1 set of all pump bearings
3. 1 mechanical seal

B. Spare parts shall be packaged and boxed as indicated in Section 11000.

2.4 MANUFACTURERS

A. Products shall be manufactured by one of the following (or equal):

1. Duriron Company, Inc., model [ ];
2. Goulds Pumps, Inc., model [ ];
3. LaBour Pump Company, model [ ].

PART 3 - EXEUCTION

3.1 INSTALLATION

A. Pumping equipment shall be installed in accordance with approved procedures submitted with the shop drawings and as indicated.

B. General installation requirements shall be as indicated in Section 11175.

** END OF SECTION **